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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/070,650	06/11/2002	Elmar Korbik	HM-473PCT	9218

7590 06/17/2003  
Friedrich Kueffner  
342 Madison Avenue Suite 1921  
New York, NY 10173

EXAMINER

KASTLER, SCOTT R

ART UNIT	PAPER NUMBER
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1742

DATE MAILED: 06/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/070,650

Applicant(s)

KORBIK ET AL.

Examiner

Scott Kastler

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 September 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

### *Specification*

This application does not contain an abstract of the disclosure as required by 37

CFR 1.72(b). An abstract on a separate sheet is required.

The disclosure is objected to because of the following informalities: The claims should not be referred to in the body of the specification when describing the invention, as occurs at page 4, paragraph 2 for 5 example.

Appropriate correction is required.

### *Claim Objections*

Claim 3 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The above claim does not fairly further limit independent claim 1 because the statement that the fastening elements are located in the upper and/or lower part of the cooling plate allows for the elements to be located anywhere on the plate (since the upper half of the plate is the upper portion and the lower half is the lower portion, and the "and/or" term allows for either or both of these locations to be used); while the statement that the fasteners be located "in the immediate proximity of" the cooling pipes also does not further limit the claims since "immediate proximity" is a relative term which could be considered to be broadly met by any location on the plate.

Claim 1 is objected to because of the following informalities: the above claim contains the term "the cooling medium pipes" on line 6 which lacks clear antecedent basis, and in order to

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put the claim in a more grammatically acceptable form it is suggested that the term "cooling medium pipes". Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art of the instant disclosure in view of Hille et al. the admitted prior art of the instant disclosure, at page 3 for example, teaches that it was known in the furnace art at the time the invention was made to include in a metallurgical furnace (which can be any type of metallurgical furnace since the terms after "such as" are considered only examples, and not as such further limiting recitations) which is provided with a refractory lining and an outer steel jacket, copper cooling plates where a cooling medium flows through the cooling plates by way of cooling medium pipes, where the cooling pipes extend through the steel jacket and are gas tightly welded to the steel jacket by means of compensators, thereby showing all aspects of the above claims except the additional use of fixed point fastening elements, of any type, since the recitation of a fastening bolt is only an example of a fastening element and not as such properly further limiting, and at least one movable point fastening element (claim 2), again of any type since the recitation of a fastening screw is only an example of a fastening element and not as such properly

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further limiting, or the location of the fastening elements at any particular location on the cooling plate. Hille et al teaches that in order to securely attach the cooling plate (1) to a steel jacket (10) it was known at the time the invention was made to additionally employ both fixed (bolt 11 at the center of the plate) and movable (threaded bore and bolts 9) point fastening elements in a copper cooling plate. Because improved attachment of the copper plate to the steel jacket of the admitted prior art of the instant disclosure would also be desirable, motivation to additionally include the securing fasteners (9 and 11) of Hille et al in the copper cooling plate arrangements taught by the admitted prior art of the instant disclosure would have been a modification obvious to one of ordinary skill in the art at the time the invention was made.

Claims 1 and 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese'506 in view of Stein. Japanese'506 teaches that it was known in the furnace art at the time the invention was made (see the embodiments of figures 5 and 3 for example) to include in a metallurgical furnace (which can be any type of metallurgical furnace since the terms after "such as" are considered only examples, and not as such further limiting recitations) which is provided with a refractory lining (8) and an outer steel jacket (1), cooling plates (4) where a cooling medium flows through the cooling plates by way of cooling medium pipes (11), where the cooling pipes extend through the steel jacket (1) and are gas tightly welded to the steel jacket (1) without any compensator, and where the cooling plates (4) are additionally attached to the steel jacket by means of fixed point fasteners (the bolts 3 of the embodiment of figure 5 or the attachment means (13/12) of figure 3) thereby showing all aspects of the above claims except the specific recitation that the cooling plate (4) be made of copper, although such a composition is

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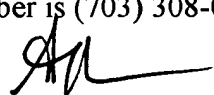
allowed by Japanese'506. Stein teaches that it was known in the art at the time the invention was made to employ copper as the cooling plate material due to it's improved thermal properties and improved cooling afforded thereby. Because improved cooling would also be desirable in Japanese'506, motivation to construct the cooling plate (4) of Japanese'506 of copper, as taught to be desirable by Stein, would have been a modification obvious to one of ordinary skill in the art at the time the invention was made.

### *Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott Kastler whose telephone number is (703) 308-2506. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (703) 308-3050. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0651.

  
Scott Kastler  
Primary Examiner  
Art Unit 1742

sk  
June 13, 2003